


<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/732,972	COON, JOSHUA J.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Bernard E Souw	2881	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/10/2003.
2. ☒ The allowed claim(s) is/are 1-54.
3. ☒ The drawings filed on 10 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>05/03/2004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## DETAILED ACTION

### ALLOWANCE

1. Claims 1-54 are allowed.

### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance:

A method for injecting ions into a quadrupole ion trap mass spectrometer (QIT-MS), comprising (a) cycling a QIT-MS through a plurality of radiofrequency (RF) amplitude levels, each RF amplitude level corresponding to the storing of ions in a particular range of ion mass-to-charge ( $m/z$ ) ratios; (b) incidenting a plurality of laser pulses on a sample during the QIT-MS cycles, wherein sample ions are desorbed from the sample each time a laser pulse is incident on the sample; and (c) injecting the sample ions so generated into the QIT-MS such that a corresponding plurality of ion pulses is produced; (d) wherein the sample-generating laser pulses are synchronized with the QIT-MS cycles through the plurality of RF amplitude levels such that the same number of ion pulses are produced during each of the corresponding  $m/z$  ratios, as recited in claim 1, is neither anticipated nor rendered obvious by any prior art.

Claim 30 is allowed for reciting an apparatus for injecting ions into a QIT-MS that is specifically designed to implement the method of claim 1.

Claims 2-29 and 31-54 are also allowed because of its/their dependencies, either directly or indirectly, upon claims 1 or 30.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Relevant Prior Art***

4. These prior arts made of record and not relied upon are considered pertinent to applicant's disclosure: USPAT # 6,534,764, # 6,545,268 and # 6,670,606, all issued to Verentchikov et al., are found to claim a subject matter closely related to the present disclosure, i.e., specifically regarding synchronization of laser desorption pulses with various time periods pertaining to a time-of-flight mass spectrometer. However, although the equivalency of QIT-MS and TOF-MS is well known and also recited in the cited prior art references, none of the latter teaches to synchronize the laser pulses in a same manner as recited the Reason for Allowance.

#### ***Communications***

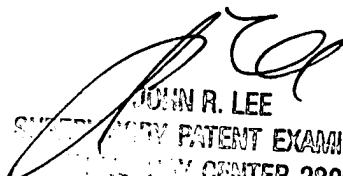
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes  
December 08, 2004

  
JOHN R. LEE  
SUPERVISOR PATENT EXAMINER  
FACILITY CENTER 2800